

B² The invention further provides a metal ion affinity peptide, wherein the affinity peptide has the formula (His-Asn)_n, (SEQ ID NO:22) wherein n=3 to 10. In certain embodiments, n = from about 4 to about 10, and preferably from about 5 to about 10. In one particular embodiment, n=6.

Please replace paragraph [0063] with the following paragraph:

B³ The invention further provides a metal ion affinity peptide, wherein the affinity peptide has the formula (His-X₁-X₂)_n, (SEQ ID NO:23) wherein each of X₁ and X₂ is an amino acid having an acidic side chain, and n=3 to 10. In one embodiment, the affinity peptide comprises the sequence (His-Asp-Asp)₆. In another embodiment, the affinity peptide comprises the sequence (His-Glu-Glu)₆. In a further embodiment, the affinity peptide comprises the sequence (His-Asp-Glu)₆. In a further embodiment, the affinity peptide comprises the sequence (His-Glu-Asp)₆.

In the Claims:

- B⁴ 1. A metal ion affinity peptide of a formula selected from the group consisting of:
formula 1: (His-X₁-X₂)_{n1}-(His-X₃-X₄-X₅)_{n2}-(His-X₆)_{n3}, (SEQ ID NO:21) wherein each of X₁ and X₂ is independently an amino acid with an aliphatic or an amide side chain, each of X₃, X₄, X₅ is independently an amino acid with a basic side chain (except His) or an acidic side chain, each X₆ is an amino acid with an aliphatic or an amide side chain, n1 and n2 are each independently 1-3, and n3 is 1-5;
formula 2: (His-Asn)_n, (SEQ ID NO:22) where n=3 to 10; and
formula 3: (His-X₁-X₂)_n, (SEQ ID NO:23) wherein each of X₁ and X₂ is an amino acid having an acidic side chain, and n=3 to 10.

REMARKS

Formal Matters

The present application has been amended to insert the Sequence Listing and corresponding SEQ ID NOS as requested by the office communication of January 14, 2003.

No new matter is added.

Certification Regarding Sequence Listing

I hereby certify that the enclosed Sequence Listing is being submitted under 37 CFR §§ 1.821(c) and (e) in paper and computer readable form (Compact Disk labeled 'CRF').

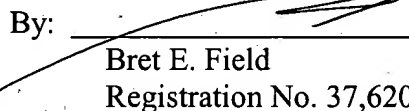
As required by 37 CFR 1.821(f), I hereby state that the content of the paper and computer readable copy of the Sequence Listing, submitted in accordance with 37 C.F.R. §1.821(c) and (e) are the same. The Computer Readable Format (CRF), being submitted under 37 CFR §§ 1.52(e) and 1.824, is formatted on IBM-PC, the operating system compatibility is MS-Windows and the file listing is:

Seqlist.txt 11.3 KB created January 29, 2003.

I hereby certify that the enclosed submission includes no new matter. The Sequence Listing was prepared with the software FASTSEQ, and conforms to the Patent Office guidelines. Applicant respectfully submits that the subject application is in adherence to 37 CFR §§ 1.821-1.825.

Respectfully submitted,

Dated: 1. 29.03

By: 
Bret E. Field
Registration No. 37,620

BOZICEVIC, FIELD & FRANCIS LLP
200 Middlefield Road, Suite 200
Menlo Park, CA 94025
Telephone: (650) 327-3400
Facsimile: (650) 327-3231



“Version with Markings to Show Changes Made”

In the Specification:

Please replace paragraph [0060] with the following paragraph:

In some embodiments, a metal ion affinity peptide comprises a peptide of the formula:

$(\text{His-X}_1\text{-X}_2)_{n1}\text{-(His-X}_3\text{-X}_4\text{-X}_5)_{n2}\text{-(His-X}_6)_{n3}$, (SEQ ID NO:21) wherein

each of X_1 and X_2 is independently an amino acid with an aliphatic or an amide side chain,

each of X_3 , X_4 , X_5 is independently an amino acid with a basic side chain (except His) or an acidic side chain,

each X_6 is an amino acid with an aliphatic or an amide side chain,

$n1$ and $n2$ are each independently 1-3, and $n3$ is 1-5.

Please replace paragraph [0062] with the following paragraph:

The invention further provides a metal ion affinity peptide, wherein the affinity peptide has the formula $(\text{His-Asn})_n$, (SEQ ID NO:22) wherein $n=3$ to 10. In certain embodiments, n = from about 4 to about 10, and preferably from about 5 to about 10. In one particular embodiment, $n=6$.

Please replace paragraph [0063] with the following paragraph:

The invention further provides a metal ion affinity peptide, wherein the affinity peptide has the formula $(\text{His-X}_1\text{-X}_2)_n$, (SEQ ID NO:23) wherein each of X_1 and X_2 is an amino acid having an acidic side chain, and $n=3$ to 10. In one embodiment, the affinity peptide comprises the sequence $(\text{His-Asp-Asp})_6$. In another embodiment, the affinity peptide comprises the sequence $(\text{His-Glu-Glu})_6$. In a further embodiment, the affinity peptide comprises the sequence $(\text{His-Asp-Glu})_6$. In a further embodiment, the affinity peptide comprises the sequence $(\text{His-Glu-Asp})_6$.

In the Claims:

1. A metal ion affinity peptide of a formula selected from the group consisting of:
formula 1: $(\text{His-X}_1\text{-X}_2)_{n1}\text{-(His-X}_3\text{-X}_4\text{-X}_5)_{n2}\text{-(His-X}_6)_{n3}$, (SEQ ID NO:21) wherein each of X_1 and X_2 is independently an amino acid with an aliphatic or an amide side chain, each of X_3 , X_4 , X_5 is independently an amino acid with a basic side chain (except His) or an acidic side chain, each X_6 is an amino acid with an aliphatic or an amide side chain, $n1$ and $n2$ are each independently 1-3, and $n3$ is 1-5;
formula 2: $(\text{His-Asn})_n$, (SEQ ID NO:22) where $n=3$ to 10; and
formula 3: $(\text{His-X}_1\text{-X}_2)_n$, (SEQ ID NO:23) wherein each of X_1 and X_2 is an amino acid having an acidic side chain, and $n=3$ to 10.